

USSR

UDC 624.131.542:628.247

ARTYUKOV, YE. I., GRUZINOV, V. V., MALKOVSKIY, O. N.

"Settling of the Ground Surface and Building Foundations in Sewer Tunnel Construction"

Moscow, Gsnovaniya, fundamenty i mekhanika gruntov, No. 5, 1971, pp 23-24

Abstract: Data on the character and magnitude of surface settling and its effect on foundations of existing buildings obtained from actual observations and laboratory studies on models are presented. It is noted that in the majority of large cities in the Soviet Union sewers are laid by the closed method, making it possible to conduct work without damaging streets, disrupting traffic, and removing buildings. The tunnels in Leningrad are at a depth of 8-15 m in Quaternary strata. Over sections of a considerable extent there is contact of two types of rocks with different properties and under these conditions the slightest disruption in their equilibrium effects the propagation of deformations over the entire massif up to the surface of the earth. It is shown that geological conditions in the vicinity of underground sewers and the degree of nonuniformity in the settling of the earth's surface have a considerable effect on the degree of deformation of foundations. The degree of deformation of the foundations of buildings

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ARTYUKOV, YE. I., et al, Osnovaniya, fundamenty i mekhanika gruntov, No. 5, 1971, pp 23-24

depends on the magnitude and nonuniformity of the settling of the surface and the position of the building in a trough. Foundations located at a distance $0.5 H_T$ from the axis of a tunnel, where H_T is the depth of the tunnel, are shown to be under the most unfavorable conditions. The characteristic form of building deformation is vertical cracks throughout the entire structure that open as much as 40 mm and an inclination of the building walls toward the sewer working. The authors feel that these results make it possible for builders and designers to establish a zone for the development of settling on the earth's surface before beginning underground work and to anticipate required safety measures.

2/2

173 020 UNCLASSIFIED M PROCESSING DATE--02OCT70
TITLE--WELDING WIRE FOR WELDING BRONZE -U-
AUTHOR--(05)-MINCHINA, A.N., VAYNERMAN, A.YE., ZOLOTOREVSKIY, YU.S.,
MAKAROV, A.G., MALMSTREM, A.I.
COUNTRY OF INFO--USSR
SOURCE--U.S.S.R. 262,604
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--26JAN70
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, MATERIALS
TOPIC TAGS--BRONZE, WELDING ELECTRODE, COPPER ALLOY, ALUMINUM CONTAINING
ALLOY, TITANIUM CONTAINING ALLOY, NICKEL CONTAINING ALLOY, IRON
CONTAINING ALLOY, MANGANESE CONTAINING ALLOY, ALLOY COMPOSITION,
METALLURGIC PATENT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1786 STEP NO--UR/0482/70/000/000/0000/0000
CIRC ACCESSION NO--AA0109747
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AA0109747

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A WELDING WIRE HAS THE FOLLOWING
PERCENT COMPN.: TI 0.2-0.4, NI 5-6.5, AL 1.5-2.5, FE 0.8-1.3, MN
2.5-3.5, AND CU THE REMAINDER.

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Acc. Nr: **AP0043640**

Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy
Fiziki, 1970, Vol 58, Nr 3, pp 1113-1118

**ON THE THEORY OF INTERMOLECULAR INTERACTION
AND THE EQUATION OF STATE OF AN EXCITED GAS**

V. N. Mal'nev, S. I. Pekar

The thermodynamic functions and equation of state of a gas in which a certain number of atoms are maintained in the excited state at a given electron energy level are considered. Resonant dipole-dipole interaction only between atoms with different electron energies is taken into account. A virial expansion into powers of a small excited atom density and an arbitrary unexcited atom density is developed. Higher group integrals up to quadruple collisions inclusive are taken into account. The possibility of decomposition of the gas into two spatially separated phases with different relative amounts of excited atoms is discussed.

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1/2 008 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--METHOD FOR OBTAINING PHOSPHATES, THIO OR DITHIOPHOSPHATES OF N
ALKOXYPYRIDINIUM -U-
AUTHOR--(03)-MALNIKOV, N.N., KHASKIN, B.A., TORGASHEVA, N.A.
COUNTRY OF INFO--USSR
SOURCE--AUTHOR CERTIFICATE NR 262901
REFERENCE--OTKRYTIYA, IZOBRETIENIYA, PROMYSHLENNYYA OBRAZTSY, TOVARNYE
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC PHOSPHATE, PHOSPHORUS SULFIDE, ALKOXIDE, PYRIDINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/1774

STEP NO--UR/0432/70/000/000/0000/0000

CIRC ACCESSION NO--AA0137014

UNCLASSIFIED

272 008

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0137014

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A METHOD IS ANNOUNCED FOR OBTAINING THIO OR DITHIOPHOSPHATES OF N ALKOXYPYRIDINIUM OF THE GENERAL FORMULA: (FORMULA SHOWN ON MICROFICHE) WHERE R AND R PRIME ARE LOWER ALKYL; R DOUBLE PRIME IS AN ALKYL, ARYL, CARBAMOYL OR ESTER GROUP; AND X AND Y ARE O OR S. ACCORDING TO THE METHOD ESTERS OF PENTAVALENT PHOSPHORUS ACIDS ARE TREATED WITH PYRIDINE N OXIDE.

UNCLASSIFIED

USSR

UDC 621.385.632

KOSTIN, YU.A., YENIN, P.S., MALODIYKO, A.P., MIKHEYEV, V.I.

"Securing Of Spiral Delay Line Of Vibration-Proof TWT"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific-Technical Collection. Microwave Electronics), 1970, Issue No 10, pp 101-108 (from RZh--Elektronika i yeye primeneniye, No 2, February 1971, Abstract No 2A181)

Translation: A stable, easily-controlled and checked method is developed for securing a delay line of the spiral type. Securing is accomplished by clinching [osazhivaniye] the warmed-up glass for forming the bulb into the form of narrow bands. The glass is clinched under the influence of a jet of nitrogen heated to a high temperature. Evacuation of the bulb in the process of securing prevents oxidation of the spiral delay line, and use of an electrical furnace for overall heating and annealing of the bulb removes the emerging thermal stress. Summary.

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USSR

UDC 581.132.08

MALOFYEV, V. N.

"Simultaneous Recording of the Intensity of Fluorescence and Photosynthetic Activity of a Leaf in a Stationary State"

Moscow, Biofizicheskiye Metody v Fiziologii Rasteniy, Nauka, 1971, pp 85-105

Translation: The article describes a setup for simultaneous measurements of the intensity of fluorescence and the rate of photosynthesis as well as the integrated absorption of light energy by the leaf during any period. It is demonstrated that the photosynthetic function and the intensity of fluorescent radiation change with a changing state of the leaf. A correlation between the gas exchange rate and the stationary intensity of fluorescence in the dismembered leaf is established. Calculated curves of the energy cost of fluorescence and photosynthesis are presented. The curves are biphasic. On the basis of the rapid changes occurring in fluorescence after dismemberment of the leaf, it is concluded that the fine structure of chloroplasts changes with changing water metabolism.

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USSR

MALOFEYEVA, G. I.

"All-Union Conference on the Theory and Practice of Mass Crystallization and Coprecipitation From Solutions"

Moscow, Zhurnal Analiticheskoy Khimii, Vol 25, No 7, Jul 70, pp 1134-1137

Abstract: The conference, held in Yerevan from 12 to 15 November 1969, consisted of three sections: coprecipitation, kinetics of crystallization, and industrial crystallization. V. I. PLOTNIKOV proposed a single mechanism for acid-base reactions of ions with insoluble precipitates. In the paper of V. I. PLOTNIKOV, V. L. KOCHETKOVA, E. G. GIBOVA, and V. P. NOVIKOVA data were reported on the effect of hydroxides on coprecipitation of small quantities of various ions. A. I. NOVIKOV approached coprecipitation of ions with hydrated oxide from the aspect of coordination chemistry. N. A. RUDNEV showed that by the geometrical plotting method it was possible to identify chemical compounds, solid solutions, and microdispersive systems during coprecipitation. I. S. CHAUS, L. B. KOVAL', G. YE. KISLANSKA, N. M. DEBYARENEO, and I. A. SHEKA discussed coprecipitation of cations with sulfides, showing that a series of chemical compounds may form in the process. Mathematical models for the coprecipitation process were discussed by G. I. MALOFEYEVA, L. P. RUZINOV, N. A. RUDNEV, and N. P. ANDREYEVA.

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USSR

MALOFEYEVA, G. I., Zhurnal Analiticheskoy Khimii, Vol 25, No 7, Jul 70 pp 1434-1437

YU. U. YEGOROV advocated that polyempirical formulas not be used for descriptions of sorptive heterogeneity. V. I. GREBEN-SHCHIKOVA, YU. P. DAVIDOV, and A. S. PERSHIN showed that data on the ξ -potential do not fully describe the adsorption of ions from the solution. V. I. GREBENSHCHIKOVA, R. V. ERZCALOVA, YU. M. ROGOZINA, and I. V. CHERNITSKA discussed the mechanism of formation of anomalous mixed crystals. Coprecipitation of mixed hydroxides from dilute chloride solution studied by V. I. GREBENSHCHIKOVA, A. V. PROKUDINA, and P. V. SAPOZHNIKOVA showed formation of mixed hydroxides with homogenous distribution in solid phase. N. B. MIKHEYEV showed that changing the cocrystallization conditions effects the value of the cocrystallization coefficient and the effectiveness in separation of elements. In another paper N. B. MIKHEYEV, I. A. RUMER, and O. N. ILYUSHCHENKO proposed that the rapid stage of adsorption determines the cocrystallization process and is connected with adsorption of desolvated ions. The thermodynamics of cocrystallization in the system aqueous solution - solid phase was reported on by I. V. MELIKHOV and D. G. BERDONKOVA. I. V. MELIKHOV and M. YA. BELOUSOVA showed that cobalt is adsorbed measurably both on the surface and inside solid phase. Minimal capture of impurities by the solid phase

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USSR

MALOFEYEVA, G. I., Zhurnal Analiticheskoy Khimii, Vol 25, No 7, Jul 70, pp 1434-1437

was discussed by G. I. GORSHEYN. B. D. STEPIN discussed distribution of micro-impurities between the crystals and solution during complex formation. Occry-stallization of alkaline elements with halogen anions and hexahalotellurides was discussed by B. D. STEPIN, V. I. SAPONOV, G. M. SEREBRYANNIKOV, et al. A method for separation of Al^{3+} , Fe^{3+} , La^{3+} , Ti^{4+} , and In^{3+} from Ca^{2+} , Zn^{2+} , Cd^{2+} , Co^{2+} , and Ni^{2+} was proposed by I. L. TEODOROVICH, R. I. GUFNIKOVA, KH. Z. MECHOS, and M. M. VINITSKA. Several papers were concerned with kinetics of crystallization, one of which was the one of S. G. BABAYAN concerned with a new investigational method of the kinetics of crystallization.

3/3

1/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--THE EFFECT OF CARBON SOURCE ON THE AMINO ACID CONTENT IN PROTEINS
OF PHOTOSYNTHETIC BACTERIA -U-
AUTHOR-(02)-MALOFEYEVA, I.V., BELYANOVA, L.P. *m*
COUNTRY OF INFO--USSR
SOURCE--MIKROBIOLOGIYA, 1970, VOL 39, NR 1, PP 82-86
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--CARBON, AMINO ACID, PROTEIN, PSEUDOMONAS, MICROORGANISM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1996/0443 STEP NO--UR/0220/70/039/001/0082/0086
CIRC ACCESSION NO--AP0117679
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0117679

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PROTEIN CONTENT IN THE CELLS OF GREEN (CHLOROPSEUDOMONAS ETHYLICA, STRAIN 3C) AND PURPLE (CHROMATIUM MINUTISSIMUM, STRAIN 2C AND PHODOPSEUDOMONAS SP., STRAIN I) SULPHUR BACTERIA WAS HIGHER DURING THEIR GROWTH IN THE MEDIUM WITH ACETATE THAN IN THE MINERAL MEDIUM WITH BICARBONATE. SWITCHING OF THESE MICROORGANISMS FROM THE PHOTOAUTOTROPHIC PATHWAY TO THE HETEROTROPHIC ONE WAS ACCOMPANIED BY SOME CHANGES IN THE CONTENT AND RATIO OF INDIVIDUAL AMINO ACIDS IN PROTEINS. CHANGES IN THE CONTENT OF HISTIDINE, THREONINE, SERINE, VALINE, LEUCINE AND TYROSINE, DEPENDENT ON GROWTH MEDIUM, WERE REGISTERED IN CHL. ETHYLICA. THE CONTENT OF ALMOST ALL AMINO ACIDS, AND ESPECIALLY OF ALANINE, LEUCINE AND GLUTAMIC ACID, UNDERWENT CHANGES IN PROTEINS OF THE PURPLE BACTERIA.

UNCLASSIFIED

USSR

UDC: 621.391:621.376.3

MALOLEPSHIY, G. A.

"Concerning the Threshold of Frequency Modulation"

V sb. Metody pomekhoustroychivogo priyema ChM i FM (Methods of Interference-Free FM and PM Reception--collection of works), Moscow, "Sov radio", 1970, pp 24-32 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12A93)

Translation: The author analyzes the interference resistance of single-channel and multichannel (frequency-division multiplexed) FM systems. A new concept is introduced of the FM threshold as a point located on the envelope of the family of curves for interference resistance. This point corresponds to the best quality of communications for a given signal at the receiver input. The preceding works by the author are used as a basis for deriving relationships for the threshold signal-to-noise ratio at the input and the threshold reference level as functions of the band of the receiver, and also for the optimum value of the band as a function of a given quality of communications. Approximating functions are found for these relationships. A multichannel FM system is analyzed in a similar manner. Resumé.

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USSR

UDC: 621.391:519.2

MALOLEPSHIY, G. A.

"On the Question of the Resistance to Interference of Frequency Modulation"

V sb. Metody pomekhoustoychivogo priyema ChM i FM (Methods of Interference-Free FM and PM Reception--collection of works), Moscow, "Sov. radio", 1970, pp 12-23 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12A48)

Translation: The author's previous works on interference resistance of communications systems with frequency modulation are developed with respect to introducing the corresponding approximating functions which have made it possible to derive final expressions for the signal-to-noise ratio in the channel of the system with an accuracy of the order of 0.1 DB applicable to any values of the parameters of the system. These results are compared with the corresponding results of other authors who have used these or other simplified methods (Rice, Ryskin, Middleton, Chugin). The error resulting from use of these simplified methods is evaluated as well as the limits of applicability. Resumé.

1/1

1/2 041 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--ENERGY SPECTRUM DURING TRANSMISSION OF DISCRETE INFORMATION BY
MULTIPOSITIONAL SIGNALS -U-
AUTHOR--MALOLEPSHIY, G.A.
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, RADIOTEKHNIKA, NO 2, 1970, PP 95-97
DATE PUBLISHED-----70
SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., PHYSICS
TOPIC TAGS--DATA TRANSMISSION, ENERGY SPECTRUM, PULSE SIGNAL, RANDOM NOISE
SIGNAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1999/1282 STEP NO--UR/0108/70/000/002/0095/0097
CIRC ACCESSION NO--AP0123241
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0123241

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN EXPRESSION IS DERIVED FOR THE CORRELATION FUNCTION AND ENERGY SPECTRUM OF A RANDOM, PULSED SEQUENCE WITH A DETERMINED TIME INTERVAL. THE SEQUENCE REFLECTS THE MULTIPositional SIGNAL DURING THE TRANSMISSION OF DISCRETE INFORMATION.

UNCLASSIFIED

USSR

UDC: 621.3.019.4:681.327.8

M
MAIOLEPSHIY, G. A.

"Effect of the Video Strip Band on Noise Immunity in Discrete Signal Transmission"

Moscow, Elektrosvaz', No. 5, 1970, pp 14-22

Abstract: The effect of the video strip band on noise immunity is considered for four methods of formation of the discrete signal: a binary signal with an active pause (a double-poled signal); a binary signal with a passive pause (single-poled signal); a signal with varying polarity; and a signal with variable package polarity. Since the inter-symbol noise resulting from nonstationary processes in the video strip is a function of the specific signal realization, all possible realizations and the extent of their inter-symbol noise should be considered. The author limits himself to video strip characteristics in which transient processes affect a given symbol through the two preceding and the two succeeding symbols, all other symbols being neglected. For each of the four realizations listed above, the value of the signal at the video filter output is found. The author asserts that all the results obtained in this paper can be extended to some cases of radio signal transmission under the condition of symmetry of the radio-frequency strip frequency characteristics and the use of coherent reception. Three tables, nine illustrations, and bibliography with seven (Russian titles).

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USSR

UDC: 621.375.024(088.8)

POLEVIK, Yu. A., GASPAROV, R. G., MALOLETNEV, A. V.

"A Reversible Half-Wave DC Amplifier"

USSR Author's Certificate No 259165, filed 5 May 68, published 23 Apr 70
(from RZh-Radiotekhnika, No 11, Nov 70, Abstract No 11D139 P)

Translation: This Author's Certificate introduces a reversible half-wave DC amplifier which contains two diodes connected in parallel opposition, and a choke. To simplify the control circuit and maintain linearity of the output characteristic when it passes through zero, connected in parallel with the load is a network made up of a resistor and the controlling winding of the choke. The working winding of the choke is connected through a diode to the controlling electrode of a controlled rectifier, and a half-wave pulse duration modulator is connected to the input of a second rectifier. E. L.

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USSR

UDC: 621.375.4

MALOMUZH, V.

(Maj. Gen.)

Mil

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THE RELIABILITY OF EQUIPMENT

Section 504, Title 10, U.S. Code

The decisions of the Joint Chiefs of Staff are that the average reliability of equipment in the field is not as high as it should be. The Joint Chiefs of Staff are of the opinion that the equipment in the field is not as reliable as it should be. The Joint Chiefs of Staff are of the opinion that the equipment in the field is not as reliable as it should be.

The dependability of equipment, be it an airplane, a missile or radar system, in operation is not only a function of the reliability of the equipment in the laboratory and production, but also of the level of organization and maintenance in the field. The Joint Chiefs of Staff are of the opinion that the equipment in the field is not as reliable as it should be.

The Joint Chiefs of Staff are of the opinion that the equipment in the field is not as reliable as it should be. The Joint Chiefs of Staff are of the opinion that the equipment in the field is not as reliable as it should be. The Joint Chiefs of Staff are of the opinion that the equipment in the field is not as reliable as it should be.

USSR

UDC: 621.372.832

MALOBATSKIY, L. G., Member of the Scientific and Technical Society of Radio Engineering, Electronics and Communications imeni A. S. Popov

"A Directional Coupler on Coupled Lossy Lines"

Moscow, Radiotekhnika, Vol 27, No 7, Jul 72, pp 27-29

Abstract: The principal working parameters of a coupler on coupled lossy lines (Fig. 1) are calculated. The procedure is based on using the method of mirror images (G. Reed, D. Wheeler, "Voprosy radiolokatsionnoy tekhniki", 1957, No 3), and reduces to describing processes in two homogeneous transmission lines which are symmetric relative to axis YY and have wave impedances ρ_{oe} and ρ_{oo} respectively for cases of even (Fig. 2a) and odd (Fig. 2b) modes of excitation. A numerical example is given.

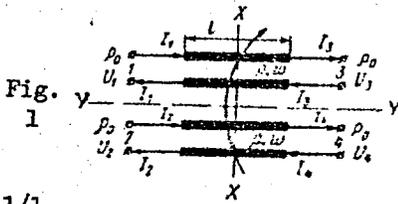


Fig. 1
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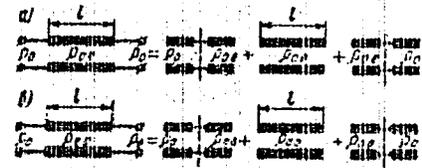


Fig. 2

Circuit Theory

USSR

UDC: 621.372.82

MALORATSKIY, L. G. and YAVICH, L. R.

Proyektirovaniye i raschet SVCh elementov na poloskovykh liniyakh (Design and Computation of UHF Elements Using Ribbon Lines), Moscow, "Sovetskoye radio," 1972, 232 pp

Abstract: Primarily a designer's handbook, this volume deals with miniaturized ultra high frequency circuits, their design and computation. It comprises five chapters and two appendices. The first chapter considers relationships between currents and voltages in many types of devices, required for understanding the mathematical transformations in the investigation of uhf elements, and demands comprehension of matrix theory as prerequisite. The next chapter investigates ribbon lines, which it defines as a line with a ribbon, square, or circular cross-sectioned conductor at some distance from a metal plane or between two metal bases. The following three chapters are concerned with uhf filter design, directional couplers, and couplers with connecting lines. In these chapters, as in the first and second, the accent is on design practice with little in the way of mathematical profundity. The two appendices contain tables of matrix relationships meant as computation aids, and tables for converting power and voltage ratios

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UDC: 621.372.82

USSR

MALORATSKIY, L. G., et al, Design and Computation of UHF Elements
Using Ribbon Lines, Moscow, "Sovetskoye radio," 1972, 232 pp
into decibels and nepers. A final bibliography contains 72 titles.

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UDC: 621.372.82

USSR

MALORATSKIY, L. G. and YAVICH, L. R.

Proyektirovaniye i raschet SVCh elementov na poloskovykh liniyakh
(Design and Computation of UHF Elements Using Ribbon Lines), Mos-
cow, "Sovetskoye radio," 1972, pp 231-232

Translation:

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MALORATSKIY, L. G. and YAVICH, L. R., *Proyektirovaniye i raschet SVCh elementov na poloskovykh liniyakh*, "Sovetskoye radio," 1972, pp 231-232

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USSR

MALCRATSKIY, L. G. and YAVICH, L. R., *Proyektirovaniye i raschet SVCh elementov na poloskovykh liniyakh*, "Sovetskoye radio," 1972, pp 231-232

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MALORATSKIY, L. G. and YAVICH, L. R., *Proyektirovaniye i raschet SVCh elementov na poloskovykh liniyakh*, "Sovetskoye radio," 1972, pp 231-232

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USSR

MALORATSKIY, L. G. and YAVICH, L. R., *Proyektirovaniye i raschet SVCh elementov na poloskovykh liniyakh*, "Sovetskoye radio," 1972, pp 231-232

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UDC: 621.372.832

USSR

MALORATSKIY, L. G. and CHERNE, Kh. I.

"Loop Systems for Adding Generator Power"

Kiev, Izvestiya VUZ SSSR--Radioelektronika, No 9, 1972, pp 1105-1113

Abstract: Asserting that the output power of uhf oscillators can be added by miniaturized directional couplers, the authors discuss the advantages of double-loop couplers used for this purpose, and investigate the addition of the output power of two and four uhf oscillators through the use of such devices. The basic circuit for the addition of two uhf oscillators by a double-loop coupler is given and its theory of operation developed. A table by which the synchronizing signals input to the oscillators can be easily determined given the reflection coefficients in the branches of a three-decibel direction coupler circuit is reproduced. Some particular cases of the addition of four-oscillator outputs are examined, and the conditions for optimal summation of power outputs are established. The proper sequence of steps in the construction of power summation systems is also indicated.

1A

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Waveguides

M

UDC 621.372.85(088.8)

USSR

SHVORINA, I. M., MALORATSKIY, L. G., PAKHOMOV, I. M.

"Waveguide-Band Power Divider"

USSR Author's Certificate No 234598, Filed 25 Dec 67, Published 11 Mar 70
(from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9B153F)

Translation: The proposed power divider contains a symmetrical ribbon line and a waveguide shorting plug. In order to decrease the losses and simplify the design, two coaxial waveguide holes are cut in the screen plates of the ribbon line. The design of the wide walls of the holes is perpendicular to the plane of symmetry of the ribbon line, and it is symmetrical with respect to the conducting axis of the band. There is one illustration.

Acc. Nr: **AP0044188**

Ref. Code: UR 0016

PRIMARY SOURCE: **M**
Zhurnal Mikrobiologii, Epidemiologii, i
Immunobiologii, 1970, Nr 2, PP 72-75

SPECIFICITY OF INTRADERMAL TEST WITH TSUVERKALOV'S
ALLERGEN (DYSENTERIN)

I. P. Malorodov

The paper is devoted to the problem on specificity of Tsuverskalov's allergen (dysenterin). Intradermal test with an allergen was carried out in 400 patients suffering from acute dysentery. To ascertain the extent of specificity of the reaction and diagnostic value of the allergen the preparation was also tested on 150 convalescents after this disease (time lapse from the termination of the disease - 4 to 5 years), 300 persons with infectious diseases of nondysenteric etiology, but with a marked allergic component (rheumatism, scarlet fever, tuberculosis), 50 persons with diseases of noninfectious etiology, but with marked allergic features of the organism (bronchial asthma), and on 1,000 healthy individuals. Investigations demonstrated that Tsuverskalov's allergen was a highly sensitive preparation which gave a positive intradermal reaction in 85.7% of the patients suffering from dysentery. The fact that in cases of nondysenteric etiology with an allergic component intradermal test with an allergen was revealed in but a few cases and was not very marked, indicated specificity of the preparation.

//

REEL/FRAME
19770673

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USSR

UDC: 621.317.7.089.68

ABROSIMOV, E. A., LAZAREVA, N. A., MALOSHENKO, O. Ya., SMILT, V. I.

"A Precision High-Frequency Fixed Capacitor"

Dokl. Vses. nauchno-tekhn. konferentsii po radiotekhn. izmereniyam. T. 1 (Re-
ports of the All-Union Scientific and Technical Conference on Radio Engineer-
ing Measurements. Vol. 1), Novosibirsk, 1970, pp 11-16 (from RZh-Radiotekhnika,
No 12, Dec 70, Abstract No 12A362)

Translation: It is noted that standard capacitors must be developed for use with special circuits so that standard inductors and resistors can also be made. A high-frequency reference capacitor based on a coaxial design made at the Siberian Scientific Research Institute of Metrology is described. Its electrical parameters are given. One illustration, bibliography of eight titles. N. S.

1/1

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USSR

MALOSHEVSKIY, S. G.

"Unlimited Divisibility of One Set of Distributions"

Teoriya Funktsiy, Funkts. Analiz i Ikh Pril. Resp. Mezhd. Nauch. Sb.
[Theory of Functions, Functional Analysis and their Applications. Republic
Interdepartmental Scientific Collection], 1972, No 16, pp 212-214 (Trans-
lated from Referativnyy Zhurnal Kibernetika, No 4, 1975, Abstract No 4V22,
by the author).

Translation: It is proven that distributions with densities such as

$$p(x) = C \exp\{\beta x - A e^{bx}\}, A > 0, b > 0$$

are limitlessly divisible. A convenient formula is found for calculation of
the moments of these distributions.

1/2 015 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--POSSIBILITY OF ASSESSING THE EFFECT OF A PLASTICIZER ON THE
AUTOHESION OF ELASTOMERS FROM THE FLORY HUGGINS CONSTANT VALUE -U-
AUTHOR-(02)-KUPTSOV, YU.D., MALOSHUK, YU.S. M
COUNTRY OF INFO--USSR
SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 3, PP 388-390
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--PLASTICIZER, ADHESION, ELASTOMER, SYNTHETIC RUBBER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1592 STEP NO--UR/0069/70/032/003/0388/0390
GIRC ACCESSION NO--AP0125214 UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125214

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AS EXEMPLIFIED BY ELASTOMER SYSTEMS BASED ON SYNTHETIC RUBBERS, THE AUTOHESION OF A PLASTICISED SYSTEM HAS BEEN SHOWN TO BE INVERSELY PROPORTIONAL TO THE VALUE OF THE FLORY HUGGINS CONSTANT (CHI). OWING TO THIS FACT, IT IS POSSIBLE IN ASSESSING THE EFFECT OF A PLASTICIZER ON THE AUTOHESIVE PROPERTIES OF ELASTOMERS TO MAKE USE OF THE GRAPHICAL DEPENDENCE OF AUTOHESION ON THE CONSTANT CHI.

FACILITY: INSTITUT TONKOY KHIMICHESKOY
TEKHNologii IM. M. V. LOMONOSOVA MOSCOW.

UNCLASSIFIED

Polymers and Polymerization

USSR

M UDC 678.049:539.612

KUPTSOV, YU. D., and MALOSHUK, YU. S., Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov, Moscow, Ministry of Higher and Secondary Specialized Education RSFSR

"Evaluation of the Effect of a Plasticizer on the Autoadhesion of Elastomers on the Basis of Values of the Flory-Huggins Constant"

Moscow, Kolloidnyy Zhurnal, Vol 32, No 3, May-Jun 70, pp 388-390

Abstract: The autoadhesion strength of elastomers of three chemically different types (SKN-26, SKS 30-1, and SKS-25MVP5ARK) containing plasticizers of different chemical composition in amounts not exceeding the limit of compatibility with the elastomer was determined and correlated with values of the Flory-Huggins constant characterizing the interaction between the elastomer and plasticizer. The autoadhesion varied in inverse proportion to the F.-H. constant. On the basis of the relation established, the effect of a plasticizer on the autoadhesion strength of an elastomer can be evaluated graphically by using a straight-line plot showing the dependence

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KUPTSOV, YU. D., et al, Kolloidnyy Zhurnal, Vol 32, No 3, May-Jun 70,
pp 388-390

between autoadhesion strength and the values of F.-H. constants for
the elastomer in question containing other plasticizers. The
authors thank S. S. VOYUTSKIY for taking part in the research.

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" 91 "

1/2 029 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--ULTRASOUND AND PHONOPHORESIS THERAPY OF PATIENTS WITH VASOMOTOR
RHINITIS -U-
AUTHOR--(02)-NIKOLAYEVSKAYA, V.P., MALOSOLOV, V.A. M
COUNTRY OF INFO--USSR
SOURCE--VESTNIK OTORINOLARINGOLOGII, 1970, NR 3, PP 46-59
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--OTOLARYNGOLOGY, HYDROCORTISONE, ULTRASONIC BIOLOGIC EFFECT,
ALLERGIC DISEASE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1989/1287 STEP NO--UR/0607/70/000/003/0056/0059
CIRC ACCESSION NO--AP0107762
UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0107762

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN 40 PATIENTS WITH VASOMOTOR RHINITIS (IN 28--A NEUROVEGETATIVE AND IN 12--AN ALLERGIC FORM) ULTRASOUND (15 CASES) AND HYDROCORTISONE PHONOPHORESIS (25 CASES) WERE EMPLOYED FOR TREATMENT. A LABILE TECHNIQUE OF SOUNDING THE BACK AND LATERAL SLOPES OF THE NOSE WAS USED. THE REGIME WAS CONTINUOUS. THE ULTRASOUND INTENSITY RANGED FROM 0.15 TO 0.2 WT-CM PRIME2. THE EFFECT LASTED FOR FIVE MINUTES; A COURSE CONSISTED OF 12 PROCEDURES; PETROLATUM OIL WAS THE CONTACT MEDIUM. IN HYDROCORTISONE PHONOPHORESIS THE AREA INVOLVED WAS PAINTED WITH A MIXTURE OF HYDROCORTISONE EMULSION (1 ML-25 MG) WITH PETROLATUM OIL, INTO THE NASAL CAVITY TAMPONS IMPREGNATED WITH HYDROCORTISONE EMULSION WERE INTRODUCED. THE CLINICAL EFFECT OF ULTRASOUND WAS AS FOLLOWS: DISAPPEARANCE OF SYMPTOMS OF RHINITIS--IN 4 CASES, A SIGNIFICANT IMPROVEMENT OF THE SYMPTOMS--IN 9 CASES. HYDROCORTISONE PHONOPHORESIS PRODUCED A BETTER THERAPEUTIC RESULT: DISAPPEARANCE OF RHINITIS--IN 8, A MARKED IMPROVEMENT--IN 12 AND A SATISFACTORY EFFECT--IN 5 PATIENTS. THE CLINICAL EFFECT OF ULTRASOUND AND HYDROCORTISONE PHONOPHORESIS TREATMENT OF VASOMOTOR RHINITIS WAS ATTENDED BY REDUCTION OF EOSINOPHILIA IN THE BLOOD AND NASAL SECRETA, FUNCTIONAL NORMALIZATION OF THE CILIARY EPITHELIUM AND IMPROVEMENT OF NASAL BREATHING. FOLLOW UP (FROM 3 TO 6 MONTHS) WAS STUDIED IN 29 PATIENTS. A RELAPSE WITH A PRONOUNCED WEAKENING OF SYMPTOMS WAS NOTED IN 6 PATIENTS SUBJECTED TO ULTRASOUND THERAPY AND IN 3--TO HYDROCORTISONE PHONOPHORESIS. FACILITY: KLINCHESKOGO OTO. MOSKOVSKOGO N-I INSTITUTA UKHA, GORLA I NOSA MINISTERSTVA ZDRAVOOKHRANENIYA RSFSR.

UNCLASSIFIED

USSR

UDC: None

MALOV, A. D. and RYZHIY, V. I.

"Photoconductivity of Semiconductors in Strong Magnetic Fields"

Leningrad, Fizika Tverdogo Tela, vol 14, No 7, 1972, pp 2048-2052

Abstract: An investigation is made of the dynamic action of uhf radiation on the transverse static conductivity of nondegenerate semiconductors in strong magnetic fields. It has been shown that the heating of electrons by the uhf field in a nondegenerate electron gas with no magnetic field contributes more to the photoconductivity of the gas than the dynamic action. The authors find that the same situation is true for a similar gas in a strong magnetic field. As was shown in an earlier paper by the last-named of the authors above in the same journal (14, 1972, p 35), several effects occur independently of carrier current heating in nondegenerate semiconductors in a strong magnetic field. Two such effects are discussed in this paper: the polarization selectivity of the photoconductivity, and the photoconductivity oscillations with a change in frequency of the uhf wave or of the magnetic field. The authors express their gratitude to A. D. Gladun for his comments; they are connected with the Moscow Physicotechnical Institute.

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MALOV, A. G.

Microelectronics

Excerpt from Russian language book edited by F. V. Zakin; House, Mikroelektronika, No. 2, 1972, Sovetskoye Radio Publishing, Moscow, UDC 621.382.621.396.6-191.5.

MICROELECTRONICS

JPRS 57333
25 October 1972

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- 2 -

11 - USSR -

cuts, an important role is played by the choice of a constant current source.

The article analyzes the dependence of instability of the logic differential of the integrated circuits for the current switches on change in the destabilizing factors (supply voltage, temperature, and technological scatter in the component parameters) by using different modifications of the constant current source.

Recommendations are given for the optimal selection of the constant current source.

The article contains 4 figures, 1 table, and 5 bibliographic references.

UDC 621.385.5.011.07

Distribution of Thermoelectric Deformations in the Surface Region of Thermally Oxidized Silicon. Valiyev, N.M., Uzbekov, B.I., Lukin, A.A., Halov, G.G., and Zakharov, A.A. in the collection Mikroelektronika, edited by F.V. Lukin, No 5, p 282, Sovetskoye Radio Publishing House, 1972.

The article theoretically analyzes the distribution of elastic deformations in the surface region of thermally oxidized silicon. The authors examine the case of a dense oxide film on a semiconductor and the case of termination of its denseness. The values obtained agree with the theoretical computation. The authors discuss the results of experiments testifying to the localization of the deformations in the surface layer of silicon at the sites of termination of denseness of the oxide. They show the influence of thermoelectric deformations on the chemical activity and volt-Faraday characteristics of the MDP structures.

The article contains 3 figures and 11 bibliographic references.

UDC 621.383.42:546.48.22/23

Investigation of the Longitudinal Operating Mode of CDS-CDS₂ Film Photoresistors. Gogorikh, A.A., Krolavets, K.H., Korshak, V.A., and Skarzhnevskaya, E.L. in the collection Mikroelektronika, edited by F.V. Lukin, No 5, p 296, Sovetskoye Radio Publishing House, 1972.

The article describes a manufacturing method and the parameters of the CDS-CDS₂ photoresistors, operating in a longitudinal mode. The authors mention their high specific sensitivity (0.5-1 A/V²) and the weak dependence of the

172 019 UNCLASSIFIED
TITLE--THE TECHNOLOGY OF COLD STAMPING -U-

PROCESSING DATE--30OCT70

AUTHOR--MALOV, A.N.

COUNTRY OF INFO--USSR

SOURCE--FOURTH ED. REV. AND EXP. (TEKHNOLOGIYA KHOLODNOY SHIAMPVKI, IZD. 4-OYE., PERER. I DOP.) MOSCOW, MASHINDSTROYENIYE, 1969. 567 PP
DATE PUBLISHED-----70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, MATERIALS

TOPIC TAGS--METAL BENDING, METAL STAMPING, METAL DRAWING, METAL FORMING,
METAL FORGING, DIE PUNCHING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1998/1460

STEP NO--UR/0000/70/000/000/0001/0567

CIRC ACCESSION NO--AM0121907

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AM0121907

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TABLE OF CONTENTS: PREFACE 3.
CHAPTER I CONTROL AND PREPARATION OF THE MATERIAL FOR STAMPING 6. II
CUTTING, PIERCING, TRIMMING 51. III DEBURRING 109. IV BENDING
141. V DRAWING 194. VI FORMING 297. VII CALIBRATING,
CLINCHING, CENTER PUNCHING, HEADING, PRESSING, AND CLOSED IMPRESSION DIE
FORGING 327. VIII COMBINATION STAMPING 381. IX COLD STAMPING IN
SMALL BATCH PRODUCTION 443. X MECHANIZATION AND AUTOMATION OF THE
PROCESSES OF COLD STAMPING 477. XI STANDARDIZATION OF THE WORK OF
COLD STAMPING AND ESTIMATION OF TECHNOLOGICAL SELF-COST OF THE PARTS
539. ADDENDA 559. LITERATURE 564. THE BOOK DEALS WITH THE
TECHNOLOGY OF COLD STAMPING OF BILLETS FROM SHEET MATERIAL APPLICABLE TO
BATCH AND MASS PRODUCTION OF ARTICLES OF PRECISION MACHINE AND
INSTRUMENT CONSTRUCTION. GIVEN ARE METHODS FOR PLANNING AND
CALCULATING THE TECHNOLOGICAL PROCESSES AND REFERENCE MATERIAL FOR
MAKING THE CALCULATIONS. EXAMINED ARE FACTORS INFLUENCING THE PRECISION
OF THE PARTS MANUFACTURED. GIVEN IS BASIC INFORMATION ON AUTOMATION OF
THE PROCESSES OF STAMPING.

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UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General,
Derwent, 2-70

243653

LOADING LONG CYLINDRICAL ARTICLES IN
PILES INTO OPEN WAGONS by the method of

placing cross members on the bottom of the wagon and fitting uprights (3) into these. To shorten loading and unloading time, most of the load is laid on the wagon in the usual manner until it reaches a height below the tops of the uprights which is less than the diameter of the articles being loaded. The remaining, tapered, part of the pile (6) is laid on top of securing ropes (5) which are then wrapped round it. The wagon sides are secured with the top pieces (8) located between the piles (at the edge faces).

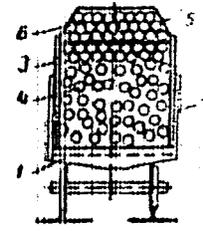
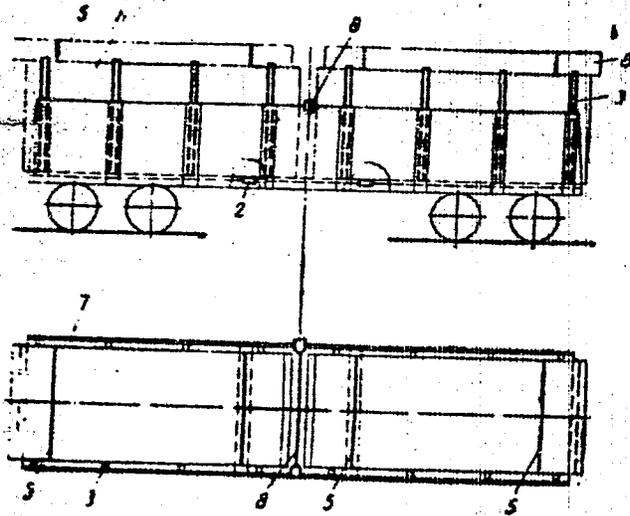
10.11.64 as 928674/27-II A.P. MALOV et al. Railway Transport Sci.Res. Institute (29.9.69) Bul. 17/14.5.69. Class 20c, Int. Cl. B 61d.

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АВТОРСКИ АВТОРЫ: Майоров, А. Д.; Чинярев, С. С.; Гончаренко, Н. Т.
Всесоюзный Научно-Исследовательский Институт Железнодорожного Транспорта



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Г.В.

19821478

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UDC 577.4

MALOV, K. M.

"Various Representations of Functions of Four-Valued Logic"

Tr. N.-i. i proyekt. in-ta po vnedreniyu vychisl. tekhn. v nar. kh-vo (Works of the Scientific Research and Planning and Design Institute with respect to Introduction of Computer Engineering in the National Economy), 1971, vyp. 8, pp 22-27 (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V398)

No abstract

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172 022 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--ANTISMOKE ADDITIVES FOR DIESEL FUEL -U-

AUTHOR--(05)-KULIYEV, A.M., ALIYEV, Z.E., SHAKHGELDIYEV, M.A., VARSHAVSKIY,
I.L., MALOV, R.V.
COUNTRY OF INFO--USSR

SCURCE--U.S.S.R. 264,842
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--03MAR70

SUBJECT AREAS--PROPULSION AND FUELS

TOPIC TAGS--CHEMICAL PATENT, FUEL ADDITIVE, DIESEL FUEL, BENZENE
DERIVATIVE, ORGANOBARIUM COMPOUND, ANTISMOKING PROGRAM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3002/1342

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128749

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AA0128749
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A HIGH ASH BA ALKYLPHENOLATE IS
USED AS A SMOKE INHIBITOR FOR DIESEL FUEL. FACILITY: INSTITUT
KHEMII PRISADOK AN AZERBAYDZHANSKOY SSR.

UNCLASSIFIED

USSR

4

ARAKSLOV, A. G., KOLESNIKOV, B. P., KONONENKO, V. A., LUK'YANOV, A. N.,
MALOV, V. Y., POLYAK, L. Z., ROZANOV, A. N., and TITOV, B. V.

"Device for Studying Structural Changes in Refractory Metals and Alloys"

USSR Authors' Certificate No 356536, Cl. G 01n 23/20, filed 7 Dec 70, published 23 Oct 72 (from Otkrytiya, Izobreteniya, Promyshlennyye Obratztsy, Tovarnyye Znaki, No 32, 1972, p 121)

Abstract: The device, which studies structural changes during high-temperature strain in a vacuum or other environment, contains a working chamber with a beryllium window located on the front cover, a loading mechanism, clamps for the specimen, heaters, mechanisms for measurements and the recording of readings. For purposes of studying the structure of a specimen during tests, the front cover of the working chamber has mounted on it a device for X-ray analysis with a mechanism for the vertical displacement of this device along the specimen and a mechanism for rotating it around a horizontal axis.

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Acc. Nr: **AP0042480** Abstracting Service:
CHEMICAL ABST.

4-70 Ref. Code:
UR0367

m

84984w Properties of low-lying 2+ levels in nuclei. Malov, ~~Ussuriysk~~ Troitskii, M. A. (Inst. At. Energ. im. Kurchatova, Moscow, USSR). *Vad. Fiz.* 1970, 11(1), 78-85 (Russ). Changes in the properties of low-lying 2+ levels are investigated with a change in the no. of particles in the region of the nuclei, magical with respect to one kind of particle. The relation is presented between the quadrupole moment of the 2+ level and the quadrupole moments of the neighboring nuclei in the ground state, and between the energy shift of the 2+ level which appears when certain particles are added to the nucleus. The strong drop in energy of the 2+ level, when 2 particles are added to the closed shell, is explained. An expression is obtained which can be used to calc. the change of the static moments of the 2+ levels, when the no. of particles in the nucleus is changed. ... L. Karr

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REEL/FRAME
19760445

Acc. Nr: **AP0054656**

Ref. Code: **UR 9115 B**

PRIMARY SOURCE: *Ortopediya, Travmatologiya i Protezirovaniye*, 1970, Nr 2, pp 39-44

ANTIBIOTICS IN THE PROPHYLAXIS AND TREATMENT OF BACTERIAL INFECTION IN TRAUMATOLOGIC AND ORTHOPAEDIC PATIENTS

V. M. Mel'nikova, A. I. Gladshcheyn, O. N. Markova, M. I. Malova, N. P. Ivanova, Z. G. Sirinova and V. V. Kuzmenko

Facts on the prophylaxis and treatment with antibiotics of infected wounds in traumatologic and orthopaedic patients based on clinical and laboratory data of CIC are presented in the paper. In primary surgical wound debridement the authors prescribe penicillin with streptomycin or tetracyclin. It is stressed that the use of antibiotics in the so-called "clean" orthopaedic operations should be substantially limited and the demands of surgical aseptic enhanced. In purulent wound infection the staphylococcus and representatives of the intestinal group of microorganisms were the most common bacterial associations cultured. For the last year the appearance of staphylococcus in the monoculture from the infected wounds increased. Various antibiotics, their combinations with each other, sulfanilamides or nitrofuranic preparations, depending on the microflora sensitivity to them and concentration created in the focus of infection, are used in the treatment of purulent infection. The success of antibacterial therapy has been shown to depend on the rational use of antibiotics in complex with other methods of conservative and operative treatment and drugs which stimulate the organism reactivity.

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19831822

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UDC: 621.315.592

GORBACHEV, V. V., OKHOTIN, A. S., MALOVETSKAYA, V. M., and PUSILIN, I. N. Moscow Institute of Steel and Alloys

"Investigating the Infrared Reflection Spectra of Tin Telluride"

Leningrad, Fizika i tekhnika poluprovodnikov, vol 6, No 6, 1972, pp 1034-1036

Abstract: Because of the high concentration of free charge carriers in degenerate semiconductors, most methods for determining the basic parameters of the semiconductor material become complex. Hence, the optical method of investigation is preferred. In this paper, a description is given of experiments for finding the effective mass of the holes and the relaxation time in tin telluride (SnTe) by experimentally measuring infrared reflection spectra. In these experiments, the effect of the charge carrier concentration on the position of the plasma minimum was investigated. The reflection coefficient was measured in monocrystalline SnTe, grown by the Bridgeman method, with concentrations of $3.25 \cdot 10^{20}$ to $6.25 \cdot 10^{20}$ per cc. Specimens were cut in the form of plates 0.5 mm thick, and the carrier concentration in them was determined by the Hall effect.

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USSR

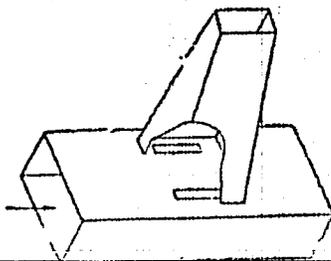
UDC 621.372.833.1

LEYKIN, V. Yu. and MALOVICHKO, A. A.

"H₂₀ and H₄₀ Wave Coupler"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No. 33, 1971, p 174

Abstract: The purpose of this device is to reduce the dimensions and construction of waveguide couplers. The basic waveguide is slotted on its broad wall along the direction of the major axis, with an auxiliary coupled waveguide, its axis perpendicular to the broad wall of the basic guide, mounted on the broad wall and above the slots. A sketch of the device is shown.



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USSR

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UDC 576.311/.34:612.014.482]:612.35-092.9

MALOVICHKO, I. I. and SHAMRAY, A. Ye., Chair of Biochemistry, Kiev Medical Institute

"Relationship Between Oxidative Phosphorylation in the Mitochondria of Liver Cells in Rats Irradiated With 800 r and the Time of Homotransplantation of Bone Marrow"

Kiev, Vrachebnoye Delo, No 4, 1970, pp 148-149

Abstract: Experiments confirmed the view of those investigators who believe that homotransplantation of bone marrow 24 hours after irradiation produces a better therapeutic effect than when the procedure is carried out at later times. Oxidative phosphorylation of mitochondria, a process that maintains the energy balance of the cell, was used as an indicator of the effectiveness of the transplants. Studies on white rats given bone marrow transplants 24 hours, 3 and 6 days after irradiation showed that respiration and phosphorylation in liver cell mitochondria were more intense 24 hours after irradiation than at either of the other two periods.

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1/2 032 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--DEPENDENCE OF OXIDATIVE PHOSPHORYLATION OF HEPATIC CELL
MITOCHONDRIA IRRADIATED WITH 800 R ON TIMING OF ADMINISTRATION OF BONE
AUTHOR--(02)-MALOVICHKO, L.I., SHARAY, A.YE.

COUNTRY OF INFO--USSR

SOURCE--VRACHEBNYE DELA, 1970, NR 4, PP 148-149

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HOMOTRANSPLANTATION, RAT, MITOCHONDRION, LIVER,
PHOSPHORYLATION, HEMATOPOIESIS, BONE MARROW, IRRADIATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1690

STEP NO--UR/0475/70/000/004/0148/0149

CIRC ACCESSION NO--AP0129060

UNCLASSIFIED

2/2 032 UNCLASSIFIED PROCESSING DATE--13NOV76
CIRC ACCESSION NO--AP0129060
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT WAS FOUND THAT OF THE THREE
TERMS (24 HOURS, 3 AND 6 DAYS) HOMOTRANSPLANTATION OF HEMOPOIETIC CELLS
24 HOURS FOLLOWING IRRADIATION EXERTED THE MOST FAVOURABLE EFFECT ON THE
RESPIRATORY AND PHOSPHORILATING FUNCTION OF HEPATIC MITOCHONDRIA IN
RATS. FACILITY: KIYEVSKOGO MEDITSINSKOGO INSTITUTA.

UNCLASSIFIED

USSR

M UDC: 612.26:611-013.46:612.014.482]-092.9

MALOVICHKO, I.I., SHAMRAY, A.YE., Chair of Biochemistry, Kiev Medical
Institute

"Respiration and Oxidative Phosphorylation of Bone Marrow Tissue of Irradiated
Rabbits After Homotransplantation of Bone Marrow Elements"

Kiev, Vracheboye Delo, No 3, 1970, pp 132-135

Abstract: Three groups of rabbits were used in this study: (a) controls,
(b) rabbits irradiated with 1200-1250 r., and (c) rabbits irradiated and
treated with bone-marrow transplants. In group (b) phosphorylation was
reduced to 83% of normal on the third day, and to 69% of normal on the seventh
day after irradiation. All animals died 8-12 days after irradiation. Group
(c), studied 7, 13, 20 and 30 days, and 2 and 5 months after irradiation,
showed continual progressive increase in oxidative phosphorylation, from
64.8% to 90% of normal. It was concluded that the stimulating effect of
transplanted bone marrow is connected with the introduction into the organism
of nucleoprotein complexes, with the nuclei of donor cells, and with the
hematological condition of the animal.

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1/2 037 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--OXIDATIVE PHOSPHORYLATION OF BONE MARROW HOMOGENATES OF IRRADIATED
RABBITS FOLLOWING HOMOTRANSPLANTATION OF BONE MARROW TISSUE -U-
AUTHOR--MALOVICHKO, I.I., SHAMRAY, A.YE.
COUNTRY OF INFO--USSR
SOURCE--VRACHEBNOYE DELO, 1970, NR 3, PP 132-135
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--PHOSPHORYLATION, RABBIT, BONE MARROW, HOMOTRANSPLANTATION,
METABOLISM, RESPIRATION, RADIATION BIOLOGIC EFFECT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FAME--1986/0650 STEP NO--UR/0475/70/000/003/0132/0135
CIRC ACCESSION NO--AP0102636
UNCLASSIFIED

2/2 037

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102636

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT HAS BEEN STUDIED OF HOMOTRANSPLANTATION OF BONE MARROW TO LETHALLY IRRADIATED ANIMALS ON THE STATE ON SOME SIDES OF THE ENERGETIC METABOLISM. RESULTS INDICATE THAT HOMOTRANSPLANTATION OF BONE MARROW HAD A DISTINCT FAVOURABLE EFFECT ON RESPIRATION AND OXIDATIVE PHOSPHORILATION OF THE BONE MARROW TISSUE IN RABBITS RECEIVING 1250 R.

UNCLASSIFIED

USSR

UDC: 681.327

ATOVM'YAN, A. E., KUDRYAVTSEV, O. M., LITVAN, A. B., MALOVICHEK, V. V.,
MUSATOV, I. F., FUKOV, N. P., YAROSHEVSKIY, I. D.

"A Multiple-Reel Tape Transport Mechanism for Memory Devices"

USSR Author's Certificate No 288051, filed 5 Aug 69, published 20 Apr 71
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 10, Oct
71, Abstract No 10B344 P)

Translation: Multiple-reel tape transport mechanisms for memory units are known which contain a reel cassette, reel drive spindles, and a drive for moving the cassette. A distinguishing feature of the described device is arrangement of the reels in the cassette by pairs in two groups coaxially with each other and with their drive spindles; and the cassette contains a bracket with guides for displacing the cassette along the axis of the spindles, which are equipped with releasable cartridges containing cams for locating the reels with internal tapers. Fastened to the reels are spring-loaded gear sectors which engage in the initial state with geared rims fastened on the cassette housing. This speeds up data sampling and improves the reliability of the device. Two illustrations.

1/1

USSR

UDC: 547.26'118

BODNARCHUK, N. D., MALQVIK, V. V., DERKACH, G. I. (deceased), Institute of Organic Chemistry, Academy of Sciences, Ukrainian SSR

"Derivatives of Phosphonocarboxylic Acids"

Leningrad, Zhurnal Obshchei Khimii, Vol 40, No 6, Jun 70, pp 1210-1217

Abstract: The esters of dialkylphosphonoacetic acids (I) are alkylated with methyl iodide; one or both hydrogen atoms of the methylene group are replaced. When I are treated with aqueous ammonia, the corresponding amides are formed. The latter react with oxalyl chloride to yield phosphorylacyl isocyanates. Treatment of I with phosphorus (V) chloride will produce replacement of either one or both of the alkoxy groups at the phosphorus atom of I by chlorine. With sodium cyanate, I yield isocyanates which, when treated with amines, yield substituted ureas.

1/1

USSR

UDC 547.297'26.118'241.07

BODNARCHUK, N. D., MALOVIK, V. Y., and DERKACH, G. I., Institute of Organic Chemistry, Academy of Sciences of the Ukrainian SSR.

"A Method of Making Dialkoxyphosphonoacetyl Chlorides"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztuy, tovarnyye znaki, 1970, No 25, Soviet Patent No 277779, class 12, filed 22 May 69, published 5 Aug 70, p 26

Translation: This Author's Certificate introduces a method of making di-alkoxyphosphonoacetyl chlorides. As a distinguishing feature of the patent, tert-butyl esters of dialkoxyphosphonoacetic acids are treated with phosphorus pentachloride at a temperature of not more than 20°C with subsequent isolation of the products by conventional methods.

1/1

— 26 —

1/2 030 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--IRON NICKEL PHOSPHORUS MAGNETIC FILMS OBTAINED BY CHEMICAL
REDUCTION -U-
AUTHOR-(03)-MALOYEV, N.YA., ARNOLD, O.P., ZUBAKIN, A.M.
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., FIZ. 1970, 13(3), 135-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, MATERIALS, PHYSICS
TOPIC TAGS--MAGNETIC MATERIAL, METAL FILM, IRON ALLOY, NICKEL ALLOY,
PHOSPHORUS ALLOY, CHEMICAL REDUCTION, MAGNETIC COERCIVE FORCE, MAGNETIC
HYSTERESIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/1031 STEP NO--UR/0139/70/013/003/0135/0136
CIRC ACCESSION NO--AT0121627
UNCLASSIFIED

2/2 030

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AT0121627

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MAGNETIC ANISOTROPY OF FILMS OBTAINED BY REDN. OF SOLNS. CONTG. FESO SUB4, 7H SUB2 O 20 NISO SUB4, 78 SUB2 O 30, KNAC SUB4 H SUB4 O SUB6, 4H SUB2 O 50, AND NAH SUB2 PO SUB4. H SUB2 O G,L. WAS STUDIED WITH FILMS PPTD. ON ROUND GLASS DISKS COATED WITH 500 ANGSTROM THICK CU AND ACTIVATED IN 0.1PERCENT POCL SUB2 AT PH 9 AND 75DEGREES. IN WEAK FIELDS, H IS SMALLER THAN H SUBC EQUALS 13 OE, THE CURVE OF MAGNETIC MOMENTS VS. H EXHIBITED 2 PE PERIODS IN THE INTERVAL OF 1.91-19.3 OE. THE CURVES IN FORWARD AND REVERSE DIRECTIONS INTERSECTED. ROTATIONAL HYSTERESIS LOSSES WERE ASCRIBED TO IRREVERSIBLE STRUCTURAL CHANGES. AT H GREATER THAN H SUBC, THE PERIODICITY VANISHED AND ROTATING MOMENTS WERE CONST. THIS AND THE ABSENCE OF TEXTURE INDICATED THAT ROTATIONAL ANISTROPY WAS ABSENT. SUCH FILMS WERE DESIGNATED AS HIGH COERCIVE ISOTROPIC FILMS. FACILITY: KRASNOYARSK, GOSPEDINST., KRASNOYARSK, USSR.

UNCLASSIFIED

USSR

USS 51:621.391

MALOZEMOV, V. N.

"Necessary and Sufficient Conditions of the Minimax"

Sb. tr. In-t mat. Sib. otd. AN SSSR (Collected Proceedings of the Institute of Mathematics, Siberian Branch of the USSR Academy of Sciences), 1973, No 10(27), pp 85 - 97 (from RZh Matematika, No 11, Nov 73, abstract No 11 V629)

Translation: A general theorem on the necessary and sufficient conditions of the minimax is established without using partial derivatives of whole functions of the parameters. It is shown that the criteria of A. M. Kolmogorov for the best polynomial and fractional-rational approximations, the theorem of necessary and sufficient conditions of the minimax in which derivatives of the parameters are used, and the theorem on the existence of a saddle point in convex-concave games follow from this theorem.

Abstract by the author.

1/1

USSR

DEM'YALOV, V. F. and MALOZEMOV, V. N.

"The Solution of Nonlinear Minimax Problems"

Teoriya Igr [Games Theory -- Collection of Works], Yerevan, 1973,
p 149 (Translated from Referativnyy Zhurnal Kibernetika, No 10, 1973,
Abstract No 10V439)

Translation: A necessary condition of stability of the value of a parameter in the solution of the problem of determination of the minimax of a continually differentiable function is formulated. The existence of an iterative method for determination of stable values of the parameter, which can be used to determine the situation of equilibrium in certain games problems, is reported.

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USSR

UDC: 517.5

DEM'YANOV, V. F. and MALOZEMOV, V. N.

"Introduction to Minimax"

Moscow, "Nauka," 1972, p 4

Translation: Minimax (the minimization of maximum error) is the principle of optimal choice of parameters.

The simplest (and historically first) linear minimax problem, that of constructing an algebraic polynomial of the closest approximation, is discussed in the first two chapters of this book.

The other four chapters develop the general theory of nonlinear minimax problems. Separately considered are discrete and continuous cases and the absence and presence of limitations on the parameters.

The basic problems are: the differentiability of the maximum function with respect to direction, the necessary minimax conditions, the sufficient conditions of the local minimax, and methods of successive approximations for finding stationary points.

The basic theoretical results are illustrated by a profusion of examples and illustrations.

The book is designed for students, undergraduate and postgraduate, of physical mathematics departments and for a large circle of science personnel.

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USSR

DEM'YANOV, V. F. and MALOZEMOV, V. N., Nauka, 1972, p 4

and engineers interested in extremal problems.

Bibliography of 86 titles and 37 illustrations.

2/2

USSR

MOZOLYUK, Yu.; CHEPULIS, G. S.; MAL'S, O. A.

"Device for Photographing Precipitation Reactions in Agar"

Moscow, Voprosy Mediko-Biologicheskikh Issledovaniy. Materialy Konferentsii Molodykh Nauchnykh Rabotnikov Mediko-Biologicheskogo Fakul'teta (Aspects of Biomedical Research. Materials of a Conference of Young Scientific Workers of the Biomedical Faculty), Ministerstvo Zdravookhraneniya SSSR, 1970, pp 15-17

Abstract: A device for photographing precipitation bands in agar is described. The device is simple in design, easy to use, and produces photos clearer than the original object. Basically it is a hollow cylinder made of tin plate two millimeters thick. Suspended within the cylinder is a movable holder with a light globe, and a metal lamina which forms a dark background for the object to be photographed. An upper cover made of glass serves as a table for the object. It is covered by nontransparent framework with a frame adjustable to the size of the object. The suspended holder within the cylinder can be moved with respect to the object. Best results are obtained with a 150
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USSR

MOZOLYUK, Yu., et al, Voprosy Mediko-Biologicheskikh Issledovaniy. Materialy Konferentsii Molodykh Nauchnykh Rabotnikov Mediko-Biologicheskogo Fakul'teta, 1970, pp 15-17

watt globe. Exposure time is 3-4 sec. Photo camera FMN-3 is used for photographing the object.

2/2

" 15 "

1/2 013 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--THERMAL EXPANSION AND VOLUME CHANGES DURING THE MELTING OF SOME A
PRIMEI B PRIMEIII C SUB2 PRIMEVI COMPOUNDS -U-
AUTHOR-(03)-GLAZOV, V.M., MALSAGOV, A.U., KRESTOVNIKOV, A.N.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(1), 143-5
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--SELENIDE, TELLURIDE, COPPER COMPOUND, GALLIUM COMPOUND, INDIUM
COMPOUND, THERMAL EXPANSION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/1346 STEP NO--UR/0363/70/006/001/0143/0145
CIRC ACCESSION NO--AP0121839
UNCLASSIFIED

2/2 013 UNCLASSIFIED PROCESSING DATE--30OCT70
CIRC ACCESSION NO--AP0121839
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TEMP. DEPENDENCE OF THE D, OF 4
COMPDS. OF THE GROUP A PRIMEI B PRIMEIII C SUB2 PRIMEVI WAS STUDIED,
NAMELY: CUGA SE SUB2, CUGATE SUB2, CUINSE SUB2, AND CUINTE SUB2. THE
D. OF THE SOLID STATE FALLS OFF LINEARLY DURING HEATING UP TO THE M. P.
DURING THE TRANSITION FROM THE SOLID TO THE LIQ. STATE, THE D. CHANGES
ABRUPTLY BY DECREASING, AND ON FURTHER HEATING OF THE MELT, IT AGAIN
FOLLOWS A LINEAR LAW. THE VOL. CHANGES ON MELTING OF THESE COMPDS.
AGREE WITH THE D. BEHAVIOR. FROM THERMAL EXPANSION DATA, CERTAIN
CHARACTERISTICS OF THE INTERAT. BOND IN THE LATTICE OF THE A PRIMEI B
PRIMEIII C SUB2 PRIMEVI COMPDS. CAN BE DETD. FACILITY: MOSK.
INST. STALI SPLAVOV, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 621.371.029.55 8

VSEKHOSVYATSKAYA, I. S., GLADYSHEVA, M. V., GONSHKOVA, E. Z.,
DUMBRAVA, Z. F., YEROFEYEV, N. M., ZOLOTAREV, A. Ye., KIYANOVSKIY,
M. P., MALISHAKOV, V. N., NOVIKOVA, L. N., PEZHEMSKAYA, M. D.,
PODDEL'SKIY, N. P., and RUDYKA, L. V.

"Some Results of Investigations Into Tilted Short-Pulse Sounding
in Ranges up to 400 km Long"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl.
Sekts. 1 (Tenth All-Union Conference on the Propagation of Radio
Waves; Report Theses; Section 1--collection of works) "Nauka,"
1972, pp 347-348 (from RZh--Radiotekhnika, No 10, 1972, Abstract
No 10A333)

Translation: Results are given of the selection of optimal operat-
ing frequencies for ranges of varying extent, the identification
of propagation modes, and the determination of the spectral char-
acteristics of the fluctuations in signal level. A. L.

1/1

USSR

UDC 669.295.053.28

SKRYPNYUK, V. M., MAL'SHIN, V. M.

"Problem of the Mechanism of Reducing Titanium Tetrachloride by Magnesium During the Production of Sponge Titanium"

V sb. Metalloterm. protsessy v khimii i metallurgii (Metallothermic Processes in Chemistry and Metallurgy -- collection of works), Novosibirsk, Nauka Press, 1971, pp 97-101 (from RZh-Metallurgiya, No 4, Apr 72, Abstract No 4G215)

Translation: The existing concepts of the mechanism of the interaction of $TiCl_4$ with Mg, the experimental methods of studying it, and some results of studying the kinetics of the reduction process in static and dynamic reactors are discussed. The bibliography has 12 entries.

1/1

USSR

UDC 669.295.053.28

MIKHIN, YA. YA., ~~MAL'SHIN, V. M.~~

"Basis for Structural and Technological Parameters of Reducing Titanium with Respect to Economic Criteria"

V sb. Metalloterm. protsessy v khimii i metallurgii (Metallothermic Processes in Chemistry and Metallurgy -- collection of works), Novosibirsk, Nauka Press, 1971, pp 102-105 (from RZh--Metallurgiya, No 4, Apr 72, Abstract No 4G216)

Translation: The theoretical principles of selecting the structural, technological, and operating parameters of the process of reducing Ti from $TiCl_4$ by magnesium using a mathematical model and economic criteria are discussed.

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USSR

UDC 669.295.053.28

ANDREYEV, A. YE., MAL'SHIN, V. M.

"Problems of Developing a Magnesiathermic Method of Obtaining Titanium"

V sb. Metalloterm. protsessy v khimii i metallurgii (Metallothermic Processes in Chemistry and Metallurgy -- collection of works), Novosibirsk, Nauka Press, 1971, pp 93-96 (from RZh--Metallurgiya, No 4, Apr 72, Abstract No 4G214)

Translation: Basic results of the scientific research work aimed at improving the apparatus and technological process of making sponge titanium are discussed. The means of further development of the magnesiathermic method of obtaining Ti and the economic aspects of this problem are demonstrated.

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USSR

UDC 669.295.053.28

SERGEYEV, V. V., and MAL'SHIN, V. M.

"Standard Process of Producing Titanium Sponge"

Sb. tr. Vses. n.-i. i proyekt. in-t titana (Collection of Works of the All-Union Scientific Research and Design Institute of Titanium), 1970, 5, pp 56-59 (from RZH-Metallurgiya, No 11, Nov 70, Abstract No 116152)

Translation: The basis and selection of the process parameters for Ti sponge production, which are subject to standardization, are presented. The criteria of standardization -- the coefficient of dispersion of the parameters of the cycle and quality indicators -- are proposed. A description is given of the results of experimental-industrial investigations regarding the standardization of cycles in producing Ti sponge. High-quality, highly homogeneous Ti sponge is produced in standard cycles. 2 tables. Authors' abstract

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USSR

UDC 669.295.053.27

ANDREYEV, YE. A., MAL'SHIN, V. M., and KROPACHEV, V. K.

"Thermophysical Studies of Vacuum Processes for the Separation of Titanium Sponge"

V. sb. Vakuumn. protsessy v tsvetn. metallurgii (Vacuum Processes in Non-ferrous Metallurgy -- Collection of Works), Alma-Ata, "Nauka," 1971, pp 166-170 (from Referativnyy Zhurnal -- Metallurgiya, No 6, Jun 71, Abstract No 6G195)

Translation of Abstract: The temperature field was investigated in a vacuum apparatus for the separation of Ti sponge. A method was proposed for the calculation of the length of the basic cycle of vacuum separation. Four illustrations, 9 bibliographic entries.

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- 79 -

USSR

UDC: 621.374.32

INOZEMTSEV, B. I., MAL'SKIY, V. A., NOVIKOV, L. G., and SHURYGIN, I. T.

"Computer Device Using Integrated Circuits"

Moscow, V sb. Svoystva materialov pri povysh. temperatura i apparatura dlya ikh ispytaniya (Characteristics of Materials at High Temperatures and the Equipment for Testing Them--Collection of Works), 1972, pp 82-83 (from RZh--Avtomatika, telemekhanika i vychislitel'naya tekhnika, No 2, 1973, Abstract No 2A496)

Translation: The construction and operation principles of a binary-digital computer in a code with a redundancy of 3 are described. The logic circuits of hybrid integrated elements of two types, used in the construction of the computer, and the schematic of the digital readout in lights of the IN-1 type are given. Six illustrations. Bibliography of three. U. S.

1/1

- 1 -

USSR

UDC: 621.396.6-181.48

MAL'TO, V. I., RITTER, A. N.

"Wide-Format Projection Photodie Model EM-528"

Elektron. prom-st'. Nauch.-tekh. sb. (The Electronics Industry, Scientific and Technical Collection), 1972, No 1, p 86 (from RZh-Radiotekhnika, No 8, Aug 72, Abstract No 8V252)

Translation: A photodie has been developed for making photomasks used in the manufacture of parts by the etching method. Resumé.

1/1

- 42 -

USSR

UDC: 621.396.6-181.48

MAL'TO, V. I., SHADURSKIY, G. P., KAYBANOV, S. G., UTLIK, A. F., RYSEVETS,
V. A.

"Organization of Preventive Inspection of Photorepeaters"

Elektron. prom-st'. Nauch.-tekhn. sb. (The Electronics Industry. Scientific and Technical Collection), 1972, No 1, pp 99-100 (from RZh-Radio-tekhnika, No 8, Aug 72, Abstract No 8V264)

Translation: A structure is proposed for the organization of services in an enterprise for carrying out preventive maintenance on photorepeaters. Resumé.

1/1

USSR

UDC: 621.396.6-181.5(088.8)

TOCHITSKIY, Ya. I., MAL'TO, V. I., KRYUK, I. P.

"A Device for Registering a Phototemplate With a Substrate"

USSR Author's Certificate No 263011, filed 19 Aug 68, published 8 Jun 70
(from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V207 P)

Translation: A device is proposed for registering a phototemplate with a substrate. The device contains a fixed base, a micromanipulator, and a recess with a spherical segment which carries the substrate. To improve the precision of registration, the recess is made in an armature connected to a spring-loaded frame by means of guides made in the form of double parallelograms equipped with elastic hinges. Inside the armature is a plunger with pneumatic stopper.

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- 121 -

USSR

UDC 669.71.053.4.094

MAL'TS, N. S., BERNSHTEYN, V. A., MEDVEDEV, V. V., BAGAYEV, A. S.

"Thermotechnical Studies on an Experimental Device for High-Temperature Leaching of Bauxites"

Tr. Vses. n.-i. i proyekt. in-ta alyumin., magn. i elektrodn. prom-sti
(Works of the All-Union Scientific Research And Planning and Design Institute of Aluminum, Magnesium and Electrode Industry), 1970, No 70, pp 109-119 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G141)

Translation: Results are presented from studies of the kinetics of incrustation of the heat-exchange surface and the heat-exchange conditions during the process of heating of bauxite pulp in the experimental device for high-temperature leaching of bauxites. The nature of incrustation of the heat-exchange surface in a broad temperature range of heating of bauxite pulp and also the effect of individual factors on this process are determined. There are 4 illustrations and 1 table.

1/1

- 4 -

1/2 020 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--INTERPRETATION OF THE INFRARED ABSORPTION SPECTRUM OF BORON OXIDE
VAPORS -U-
AUTHOR--NIKITIN, V.S., MALTSEV, A.A. M
COUNTRY OF INFO--USSR
SOURCE--VESTN. MOSK. UNIV., KHIM. 1970, 11(1), 22-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--IR SPECTRUM, ABSORPTION SPECTRUM, BORON OXIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1999/0609 STEP NO--UR/0189/70/011/001/0022/0026
CIRC ACCESSION NO--AP0107206
UNCLASSIFIED

272 020

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107206

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EARLIER STUDIES OF THE IR ABSORPTION SPECTRA OF THE VAPOR OVER B SUB2 O SUB3 IN AN INERT ATM. AND IN THE PRESENCE OF WATER VAPOR LEAD TO THE CONCLUSION THAT THE OBSD. BANDS IN THE SPECTRA (535, 740, 1320, AND 2030 CM PRIME NEGATIVE) BELONG TO B SUB2 O SUB3 VAPOR AND THAT ITS MOL. HAS THE V SHAPE STRUCTURE WITH C SUB2V SYMMETRY. THIS CONCLUSION WAS CHALLENGED BY P. L. HANST, ET AL. (1965). TO CLARIFY THIS CONTRADICTION, NEW MEASUREMENTS OF THE IR ABSORPTION SPECTRA OVER B SUB2 O SUB3 WERE MADE IN THE 350-3900 CM PRIME NEGATIVE REGION AT SIMILAR TO 1350-1600DEGREES IN DRY AR (5-20 TORR). THE SAMPLE OF B SUB2 O-SUB3 WAS PRELIMINARILY DEHYDRATED AND DEGASED AT 1000-1600DEGREES. THE NEW EXPTS. CONFIRMED THAT THE BANDS AT 2035, 1320, AND 760 CM PRIME NEGATIVE BELONG TO B SUB2 O SUB3 AND ITS MOL. HAS THE V SHAPE CONFIGURATION WITH C SUB2V SYMMETRY.

UNCLASSIFIED

1/2 007

UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--ALGEBRAIC SYSTEMS -U-

AUTHOR--MALTSEV, A.I.

M

COUNTRY OF INFO--USSR

SOURCE--ALGEBRAIC SYSTEMS (ALGEBRAICHESKIYE SISTEMY) MOSCOW, NAUKA, 1970,
392 PP

DATE PUBLISHED-----70

SUBJECT AREAS--MATHEMATICAL SCIENCES

TOPIC TAGS--MONOGRAPH, ALGEBRA, LINEAR SYSTEM, NONLINEAR SYSTEM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1987/0011

STEP NO--UR/0000/70/000/000/0001/0392

CIRC ACCESSION NO--AM0103706

UNCLASSIFIED

2/2 007 UNCLASSIFIED PROCESSING DATE--16OCT70
CIRC ACCESSION NO--AM0103706
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TABLE OF CONTENTS: FROM EDITORS
5. PREFACE BY THE AUTHDR 7. CHAPTER I GENERAL CONCEPTS 9. II
CLASSICAL ALGEBRAS 89. III LANGUAGES OF FIRST AND SECOND DEGREES
138. IV PRODUCTS AND FULL CLASSES 193. V QUASIMANIFOLDS 267.
VI MANIFOLDS 337. BIBLIOGRAPHY 384. SUBJECT INDEX 388. THE
BOOK CONTAINS A SYSTEMATIC PRESENTATION OF THE GENERAL THEORY OF
ALGEBRAIC SYSTEMS. IT WAS WRITTEN FOR MATHEMATICIANS, POST GRADUATE
STUDENTS, SCIENTISTS AS WELL AS SENIOR STUDENTS OF MATHEMATICS.

UNCLASSIFIED

1/2 033 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--CATALYTIC REACTIONS IN AN ULTRASONIC FIELD -U-
AUTHOR--(02)-MALTSEV, A.N., SOLOVYEVA, I.V. *M*
COUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(4), 1092-4
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--AMMONIA, ULTRASONIC EFFECT, CHEMICAL REACTION RATE, METAL
CATALYST, AMMONIA, CHEMICAL SYNTHESIS, HYDROGEN, NITROGEN, AQUEOUS
SOLUTION, HYDROGEN PEROXIDE, PLATINUM, RHENIUM, PALLADIUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/0898 STEP NO--UR/0057/70/044/004/1092/1094

CIRC ACCESSION NO--AP0131484
UNCLASSIFIED

... IN THE ULTRASONIC FIELD, IN THE PRESENCE OF METAL
CATALYSTS, IT WAS FOUND THAT THE ACTIVITY OF PT BLACK INCREASES 10
TIMES, OF RH BLACK 2.5 TIMES, WHILE THE ACTIVITY OF PD BLACK DECREASED.
THE DIFFERENCE IN ACTIVITY DEPENDS ON THE AMT. OF CATALYST. BY CHANGING
FROM 5 MG TO 1 MG THE ACTIVITY OF PT INCREASES AS MUCH AS 4.5 TIMES.
FACILITY: KHIM. FAK., MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW,
USSR.

UNCLASSIFIED

2/2 033
CIRC ACCESSION NO--AP0131484 UNCLASSIFIED PROCESSING DATE--04DEC70
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SYNTHESIS OF AMMONIA BY USING
AN ULTRASONIC FIELD ACTION ON A WATER MIXT OF N₂ AND H₂

1/2 017 UNCLASSIFIED PROCESSING DATE--23OCT70
 TITLE--MECHANISM OF REDOX PROCESSES TAKING PLACE IN SOLUTIONS OF SOME IRON
 (III) COMPLEXES IN A FIELD OF ULTRASONIC WAVES -U-
 AUTHOR-(02)-MARGULIS, M.A., MALTSEV, A.N.

COUNTRY OF INFO--USSR

SOURCE--KHIM. VYS. ENERG. 1970, 4(2), 160-8

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--REDOX REACTION, IRON COMPOUND, COMPLEX COMPOUND, ULTRASONIC
WAVE, PYRIDINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FAME--1997/0759

STEP NO--UR/0456/70/004/002/0160/0168

CIRC ACCESSION NO--AP0119666

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--23DCT70

CIRC ACCESSION NO--AP0119666

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MECHANISM OF THE ULTRASOUND INITIATED REDN. OF $Fe(III)$ IN K SUB3 ($Fe(C$ SUB2 O SUB4) SUB3) SOLNS. WAS STUDIED AND THE EFFECT OF THE CONC. OF H PRIME POSITIVE, C SUB2 O SUB4 PRIME2 NEGATIVE, AND ALPHA, ALPHA PRIME, BIPYRIDINE ON THE KINETICS OF THIS PROCESS WAS DETD. IN THE PRESENCE OF Ar , THE COMPLETE TRANSFORMATION OF THE COMPLEX ($Fe(III)$) YIELDS ($Fe(II)$) WAS OBSD., BUT THE INITIAL RATE OF $Fe(III)$ REDN. IN AN Ar ATM. IS LOWER BY A FACTOR OF 5 COMPARED WITH AN O ATM. IN AN O ATM. WITH INCREASING ACIDITY, THE INITIAL REDN. RATE DECREASED AS WELL AS THE STEADY STATE CONC. OF ($Fe(II)$). IN AN ATM. OF Ar AND H , THE EFFECT OF ACIDITY DECREASES NOTICEABLY. IF IN THE SOLN. UNDER ULTRASONIC TREATMENT ALPHA, ALPHA PRIME, BIPYRIDINE IS ABSENT, THE AMT. OF $Fe(II)$ FORMED IS VERY LOW. IN THE PRESENCE OF A HIGH EXCESS OF OXALATE IONS, THE REDN. RATE OF $Fe(III)$ DECREASES SOMEWHAT. IN AN ATM. OF INERT GASES, THE REDN. OF $Fe(III)$ TAKES PLACE WITH PARTICIPATION OF H PRIME POSITIVE, E SUBAQ PRIME NEGATIVE, OH PRIME NEGATIVE, AND H SUB2 O SUB2. IN A H ATM., PRACTICALLY NO H SUB2 O SUB2 IS FORMED. IN AN O ATM., REACTIONS WITH PARTICIPATION OF O TAKE PLACE. FACILITY: MOSK. GOS. UNIV. IN. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--HETEROGENEOUS CATALYSIS IN A GLOW DISCHARGE -U-
AUTHOR--(03)-YEREMIN, YE.N., MALTSEV, A.N., BELOVA, V.M.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(3), 629-31 (PHYS CHEM)
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--HETEROGENEOUS CATALYSIS, METAL CATALYST, AMMONIA,
CHEMICAL SYNTHESIS, CHEMICAL REACTION RATE, GLOW DISCHARGE,
CHEMICAL STABILITY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1984/1573 STEP NO--UR/0020/70/190/003/0629/0631
CIRC ACCESSION NO--AT0100191
UNCLASSIFIED

PROCESSING DATE--18SEP70

UNCLASSIFIED

2/2 022

CIRC ACCESSION NO--AT0100191
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE EFFECT OF INTRODUCING METAL CATALYSTS (PT, AG, AND CU IN THE FORM OF A SCREEN SHAPED INTO A ROLL) DIRECTLY INTO THE INTERELECTRODE REGION SO THAT THEY ARE IN THE PLASMA DURING DISCHARGE WAS STUDIED ON THE REACTION RATE AND STATIONARY NH SUB3 CONC. DURING THE SYNTHESIS OF NH SUB3 FROM A N-H MIXT. THE EXPTS. WERE MADE AT 50 AND 100 TORR FOR A CURRENT OF 35 MA AND A GAS FLOW RATE OF 1.2-50 L.-HR. THE CATALYSTS CAUSED A MARKED INCREASE IN THE REACTION RATE, AND THE NH SUB3 CONC. WAS INCREASED 25 TIMES OVER THAT WITHOUT A CATALYST. IN ADDN., THE PRESENCE OF A CATALYST RETARDS THE DECOMP. OF NH SUB3. THE PHENOMENON IS ATTRIBUTED DIRECTLY TO THE DIFFERENCE IN THE MECHANISM FOR THE CATALYST REACTION IN THE DISCHARGE: THE GENERATION OF ACTIVE PARTICLES IN THE DISCHARGE PLASMA AND THE SYNTHESIS AND STABILIZATION OF THE NH SUB3 MOLS. ON THE SURFACE OF THE HETEROGENEOUS CATALYST.

UNCLASSIFIED

172 027 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--EFFECT OF IONIZING RADIATION ON THE LEVEL OF HISTONES AND DNA IN
PLANT CELL NUCLEI -U-
AUTHOR-(03)-KUZIN, A.M., MALTSEV, A.V., SEYSEBAYEV, A.T.
COUNTRY OF INFO--USSR
SOURCE--RADIOBIOLOGIYA 1970, 10(1), 103-5
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--GAMMA RADIATION, RADIATION BIOLOGIC EFFECT, PLANT PHYSIOLOGY,
DNA, PHOTOMETRY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1997/0244 STEP NO--UR/0205/70/010/001/0103/0105
CIRC ACCESSION NO--AP0119240
UNCLASSIFIED

2/2 027 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AP0119240
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SEEDS DRIED IN AIR WERE IRRADIATED
WITH PRIME137 CS GAMMA RAYS IN DIFFERENT DOSES ACCORDING TO DIFFERENT
RADIOSENSITIVITIES OF INDIVIDUAL PLANTS: VICIA FABA 0.1 AND 10 KR;
TRIFOLIUM PRATENSE 10 AND 200 KR. THE IRRADIATED SEED WERE KEPT IN
WATER FOR 24 HR AT ROOM TEMP. DNA AND HISTONES WERE DETD. IN SHELLS OF
SEEDS BY A CYTOPHOTOMETRIC METHOD. THE AMT. OF DNA IN NUCLEI AFTER THE
STIMULATING DOSES DID NOT DIFFER FROM THAT IN CONTROLS, WHEREAS THE
LEVEL OF HISTONES WAS DECREASED BY 9PERCENT. AFTER IRRADN. WITH WITH
LETHAL DOSES, STRONG DEPRESSIONS WERE OBSERVED IN BOTH HISTONE AND DNA
LEVELS (20 AND 15PERCENT, RESP.). FACILITY: INST. BIOFIZ.,
PUSHCHINO, USSR.

USSR

UDC 621.372.855(088.8)

VOLYNTSEV, L. K., BOROVSKIY, YU. R., MAL'TSEV, A. YA.

"Coaxial Matched Load"

USSR Author's Certificate No 275186, Filed 29 Jun 67, Published 14 Oct 70 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4B178P)

Translation: The proposed load consists of a high frequency connector, a housing, a resistance, a cap and a tuning assembly.

1/1

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Atomic reactors

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Atomic reactors

JPRS 54787

23 December 1971

UDC 621.311.25.62.038.538.001.5

RELEASE VALUE FOR PROTECTING HEREDITARY HEALTH
AREAS OF ATOMIC POWER STATIONS

Article by B. K. Mal'tsev, Yu. V. Rubenshteyn, candidates of technical sciences; L. N. Puzosky, and A. G. Geyzlov, engineers; All-Union Research Institute for Atomic Energy, Moscow, *Teplotekhnika*, No. 8, 1971, pp. 61-65.

Radioactive materials are formed and accumulated in the reactor and coolant during the operation of an atomic power station. The possibility of their leakage and spread throughout the neighborhood of the station represents a danger. Leaks of radioactive products from the primary loop may occur under normal operation through leaks in the equipment, through reactor overloads, and, what is most dangerous, through accidents with a break in the radioactive coolant loop. Methods for preventing contamination of the environment are determined by the concept of maximum allowable heat withdrawal. It is the theory according to which one should take into account the possibility of instantaneous rupture of the line of greatest diameter (0.9-0.95 D). This has led to the development of shielding shell-constructors intended to contain all the coolant considering the energy of residual heat release and the energy of exothermal reactions which may occur at high temperatures between the core materials and the coolant.

Another, less widespread concept of the maximum accident is based on experience in using pipelines in ordinary thermal power stations. Analysis of statistical data on ruptures of lines showed that the probability of their damage for reasons of an operational nature is very small and reduces with an increase in the diameter of the line. Since corrosion and fatigue damage develop slowly, they may be observed and prevented in time under correct control.

In rupture of lines of small diameter, melting of the reactor core or damage to it in a large scale can be prevented in several or at least in the initial stage of the accident. These considerations have led to the